

REMARKS

Claims 1, 3, 5, 6, 21, 23, 25 and 26 were examined and reported in the Office Action. Claims 1, 3, 5, 6, 21, 23, 25 and 26 are rejected. Claims 1, 3-21, and 23-40 remain.

Applicant requests reconsideration of the application in view of the following remarks.

I. 35 U.S.C. § 103(a)

It is asserted in the Office Action that claims 1, 3, 5, 6, 21, 23, 25 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's prior art illustrated in Figures 1 and 2 in view of U.S. Patent No. 5,427,212 issued to Shimazu et al. ("Shimazu"). Applicant respectfully disagrees.

It is asserted in the Advisory Action that because Shimazu discloses "changing a straight design to a curve design to improve air flow" in view of Applicant's prior art, which illustrates a standard standoff to a brake rotor, it would be obvious to combine Shimazu and Applicant's admitted prior art and result in Applicant's claimed invention. According to MPEP 2141.02 "[i]n determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. (Stratoflex, Inc. v. Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); Schenck v. Nortron Corp., 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983)). Distilling an invention down to the 'gist' or 'thrust' of an invention disregards the requirement of analyzing the subject matter "as a whole." (W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984))." Applicant asserts that the concept of using a standoff for the purposes of separating a mounting hat/hub and a rotor and for increasing cooling of the rotor and mounting hat/hub by specifically directing air flow not intended to be directed must be looked at "as a whole," not just a "gist: or "thrust" of improving air flow.

Further, under MPEP 2142 "[t]o establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." (*In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)).

Applicant asserts that a prima facie case of obviousness has not been met. First, there is neither suggestion nor motivation in Shimazu or Applicant's submitted prior art to modify a standoff, which is typically used to part a mounting hat/hub from a brake rotor, to act as a traditional standoff and also as a specific air flow inducing vane. The problem Shimazu deals with is to reduce stagnation (Y) in a ventilation hole that lies between vanes in a brake rotor. (Shimazu, column 1, lines 17-33, Figures 4, 9, and 10). In fact, this is the major thrust of most ventilated brake rotor patents. The problem Applicant's invention concerns is how to use other parts of a brake system, which were never considered for directing air flow, in order to make brake cooling more efficacious.

Shimazu does not even consider air flow or correction of stagnation in any other part of a brake rotor system. Applicant's prior art only illustrates, either explicitly or implicitly, that a mounting hat/hub has a standoff that separates a mounting hat/hub from a rotor in a brake system. Nothing else can be deduced from Applicant's submitted prior art. Without reading Applicant's specification, one skilled in the art would not have thought to use a part of a brake rotor system that is used for the purpose of separating a mounting hat/hub from a rotor to direct air flow in order to improve brake cooling.

Additionally, the combination of Shimazu and Applicant's submitted prior art does not teach each and every limitation contained in Applicant's claims 1 and 21, in particular "a plurality of vents formed between adjacent aerodynamically shaped standoff vanes, wherein the vents are circumferentially distributed on the upper section, and air located within said mounting hat and air deflected from said brake rotor are induced to substantially flow through the plurality of vents in a direction

outward from a radial interior of said mounting hat to a radial exterior of said mounting hat." (See MPEP 2142, 2143.03; see also, In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)).

Therefore, since there is no suggestion at all, nor motivation to modify the references or combine the two to arrive at Applicant's claimed invention, and the prior art references do not "teach or suggest all the claim limitations," a prima facie obviousness rejection has not been made.

Moreover, according to MPEP 2143.01, "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." (In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990)). Nowhere in Shimazu is there a suggestion of the desire to improve cooling by using any other part of a brake rotor albeit the rotor inlet vanes. And, just by looking at Applicant's Figures 1 and 2, which illustrate a brake rotor system and separate mounting hat/hub, respectively, or knowing the purpose of the standoffs, as one skilled in the art would, there is not a suggestion of the desire to combine Shimazu's invention with Applicant's admitted prior art.

And, Shimazu does not teach, suggest or imply that stagnation occurs in openings between standoffs. Nor does Shimazu propose a solution, conduct a study, or have anything to do with a mounting hat/hub portion coupled to a brake rotor in relation to cooling of a surface or in order to remove stagnation. Prior art standoffs allow for spacing apart a mounting hat/hub from a rotor in order to separate the parts. One skilled in the art should know that standoffs are used for high performance applications since the two non-separated parts (rotor and mounting hat/hub) heat up during braking. If the two portions are not separated in high-performance applications, brake efficiency is reduced and instability occurs due to wobble caused by warping. Different conceptions of vane design in rotors can lead to quite different results of cooling efficiency. It is not just a curvature of a part that increases air flow. Air flow needs to be properly directed for efficiency. Air flow from one portion of a brake rotor can interfere with that of another if not designed properly.

Still further, according to MPEP 2142, [t]o reach a proper determination under 35 U.S.C. 103, the examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made. In view of all factual information, the examiner must then

make a determination whether the claimed invention 'as a whole' would have been obvious at that time to that person. Knowledge of applicant's disclosure must be put aside in reaching this determination, yet kept in mind in order to determine the 'differences,' conduct the search and evaluate the 'subject matter as a whole' of the invention. The tendency to resort to 'hindsight' based upon applicant's disclosure is often difficult to avoid due to the very nature of the examination process. However, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art." Applicant submits that without Applicant's disclosure, no thought, whatsoever, would have been made to design a standoff for the traditional purpose and also purpose where "air located within said mounting hat and air deflected from said brake rotor are induced to substantially flow through the plurality of vents in a direction outward from a radial interior of said mounting hat to a radial exterior of said mounting hat." Applicant's concept was never considered in the art of brake rotors and mounting hats.

As discussed above, neither Shimazu, Applicant's admitted prior art, or the combination of both, teach, disclose or suggest all the limitations contained in Applicant's claims 1 and 21. Since neither Shimazu nor Applicant's prior art teach, disclose or suggest the limitations contained in Applicant's amended claims 1 and 21, from which claims 3 and 5-6, and 23 and 25-26 depend on, respectively, it would not have been obvious to one of ordinary skill in the art to combine the teachings of Applicant's admitted prior art in view of Shimazu.

Accordingly, withdrawal of the 35 U.S.C. § 103(a) rejections for claims 1, 3, 5, 6, 21, 23, 25 and 26 are respectfully requested.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely 1, 3-21, and 23-40, patentably defines the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date.

If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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Linda D'Elia

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